

**What is claimed is:**

1. A system for processing a plurality of related sub-documents to produce information associated with an encompassing document structure, comprising:

5 a source of control information for determining content structure of an encompassing document;

a first document processor for deriving internal structure information by analyzing the internal structure of each of said plurality of related sub-documents in response to said control information;

10 a second document processor for deriving external structure information by analyzing the structural relationship between said plurality of related sub-documents in response to said control information; and

a data generator for generating a table of contents using said internal structure information and said external structure information.

15 2. The system according to claim 1, wherein said data generator further generates menu icons representing navigation controls supporting User navigation through said encompassing document structure using table of contents information.

20 3. The system according to claim 2, wherein said navigation controls comprise one or more of, (a) controls for navigating between sub-documents and (b) controls for navigating within an individual sub-document.

4. The system according to claim 2, wherein said navigation controls comprise one or more of, (a) controls for navigating forward or backward between sub-documents and (b) controls for navigating upward and downward within an individual sub-document.

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5. The system according to claim 1, wherein said sub-documents comprise one or more of, (a) an SGML document, (b) an XML document, (c) an HTML document (d) a document encoded in a language incorporating distinct content attributes and presentation attributes, and (e) a multimedia file.

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6. The system according to claim 1, wherein said first document processor derives said internal structure information by identifying at least one of, (a) objects within a document and (b) divisions between objects.

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7. The system according to claim 6, wherein said objects within a document comprise heading objects including at least one of, headings, footers, headers, figure titles and table titles, and non-heading objects including at least one of, paragraphs, lists tables and graphics.

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8. The system according to claim 6, wherein said divisions between objects are identified based on at least one of, (i) a horizontal line, (ii) a larger than typical vertical spacing between text lines, (iii) heading marks, (iv) text properties and (v) special objects.

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9. The system according to claim 6, wherein said control information identifies different objects.

10. The system according to claim 1, wherein said source of control information comprises an SGML document.

5 11. The system according to claim 1, wherein said second document processor derives said external structure information by using said control information in hierarchically ordering said plurality of related sub-documents to conform to a hierarchical section numbering system.

10 12. A system for processing a plurality of related sub-documents to produce information associated with an encompassing document structure, comprising:

a source of control information for determining content structure of an encompassing document;

15 a first document processor for deriving internal structure information by analyzing the internal structure of each of said plurality of related sub-documents in response to said control information;

a second document processor for compiling encompassing document structure information by integrating related sub-document structure information into composite structure information; and

20 a data generator for generating a table of contents using encompassing document structure information.

13. The system according to claim 12, wherein said second document processor compiles encompassing document structure information into a hierarchical

structure.

14. The system according to claim 12, wherein said data generator further generates navigation information supporting User navigation through said encompassing document structure using table of contents information.

5 15. A User interface system supporting processing of a plurality of related sub-documents to produce information associated with an encompassing document structure, comprising:

10 a menu generator for generating, one or more menus permitting User selection of input sub-documents to be processed to create an encompassing document structure;

15 an icon permitting User initiation of processing of related sub-document structure information to create an encompassing document structure derived by integrating related sub-document structure information into composite structure information; and

20 menu icons representing navigation controls supporting User navigation through said encompassing document structure using said composite structure information.

16. The User interface system according to claim 15, wherein said User interface menu functions are incorporated into a web browser.

25 17. A system for processing a plurality of related sub-documents to produce information associated with an encompassing document structure,

comprising:

a source of control information for determining content structure of an encompassing document;

5 a first document processor for deriving internal structure information by parsing the internal structure of each of said plurality of related sub-documents to identify structural object elements in response to said control information;

a second document processor for compiling encompassing document structure information by integrating related sub-document structure information, derived using said identified object elements, into composite structure information;

10 and

a processor for generating a navigation menu based on said composite structure information.

15 18. The system according to claim 17, wherein said navigation menu comprises a table of contents linked to associated content via a database.

19. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for determining a structure for an electronic document, the method steps comprising:

20 identifying a plurality of divisions between a plurality of document objects;

identifying a plurality of heading objects;

determining a plurality of relationships between the objects, wherein the relationships define an internal structure;

25 updating the internal structure upon determining a new relationship;

identifying a plurality of sections within each document;  
formatting the documents in a linear sequence;  
providing a plurality of section headings in a linear sequence; and  
providing a plurality of standardized controls.